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EXAMINER

GUHARAY, KARABI

ART UNIT PAPER NUMBER

2879

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/929,048

Applicant(s)

KANAZAWA ET AL.

Examiner

Karabi Guharay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment A, filed on 25 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8 and 11 is/are rejected.
- 7) ☒ Claim(s) 9, 10, 12 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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Amendment A, and the remarks have been considered and entered.

Claim 4 is cancelled.

Claims 1 & 7 are amended.

New claims 9-13 are added.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 5-6, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by S.Hirata et al. (Characteristics of High Speed Addressability of Full Color Surface-discharge AC Plasma Display Panels).

Referring to claim 1, Hirata disclose a plasma display device having first and second substrates (see Fig 1 & Fig 2) including first and second display electrodes (See Fig 1, X,Y electrodes), first and second discharge electrode parts (bulging portions) wherein a discharge gap of a substantially constant width formed between opposing first and second discharge electrode parts, discharge gap is defined by the first and second edge parts (see the magnified portion of Fig 1), first and second edge parts have lengths longer than widths of the first and the second discharge electrode parts and the first and second electrode edge part forms an angle θ satisfying the condition $30^\circ \leq \theta \leq 60^\circ$ (see the configuration of X, Y electrodes in Fig 1).

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Referring to claim 3, Hirata discloses that the first and second edge part extend obliquely with respect to the direction in which the first electrode extends and second edge part extends substantially parallel to the first edge part and obliquely with respect to the direction of the in which the second electrode extends (see magnified figure of X, Y electrode in Fig 1).

Regarding claims 5 & 6, Hirata discloses that the first and second edge parts are defined by a plurality of sides forming angles with respect to the direction in which the first and second electrode extend, wherein the first edge part has a convex shape and the second edge part has a concave shape matching the first edge part (see magnified figure of X, Y electrode in Fig 1).

Claim 11 recites essentially the same limitations of claim 5. Thus claim 11 is rejected as claim 5 (see rejection of claim 1 & 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 2, 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirata et al. as applied to claim 1.

Referring to claim 2, Hirata et al. disclose a plasma display device of claim 1. It is unclear as to whether Hirata et al. disclose a plasma display wherein the length of the discharge gap is greater than or equal to 150 microns and shorter than 200 microns. The optimization of prior art structure is generally considered to be within the skill of the art. Furthermore it is noted that on page 5, lines 12-21 in reference to the prior art Fig 3B, the applicant admits that the length of the discharge gap of a conventional display is 160 microns.

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirata et al. as applied to claim 1 above, and further in view of Koshio et al. (US 6465956).

Regarding claims 7-8, Hirata et al. discloses that the first and second electrodes (X, Y) are repeatedly formed alternately, but fail to disclose that the first discharge electrode parts extend from first and second parallel sides of the first electrode and the second discharge electrodes extend from first and second parallel sides of the second electrode, and first discharge parts includes first and second electrode patterns extending from the first and second sides of the first electrode respectively, the first electrode pattern forming a first discharge with one of the second discharge electrode parts which one opposes the first electrode pattern, the second electrode pattern forming a second discharge gap with one of the second discharge parts which one opposes the second electrode pattern where the second discharge gap is substantially

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equal to the first discharge gap. However, Koshio et al. discloses such arrangement of electrodes (see Fig 7). Furthermore Koshio et al. teach that such arrangement is advantageous since this arrangement enables smaller area for the elongated display electrodes (lines 14-37 of column 11). Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to use such arrangement of display electrodes (as shown in Fig 7) as disclosed by Koshio et al. in the device of Hirata since this will reduce total area of the display electrodes.

Allowable Subject Matter

Claims 9-10 & 12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record neither shows nor suggests a plasma display device wherein discharge gap has a length longer than or equal to 150 micron and shorter than 200 micron together with a gap formed between each of the first and the second discharge electrodes and the partition wall adjacent thereto is 90 micron or over and together with the partition walls provided with a pitch of 300 micron.

Response to Arguments

Applicant's arguments filed on 25 June 2003 have been fully considered but they are not persuasive. In response to applicant's argument that Fig 8 of Hirata does not assert the angle θ satisfying the condition $30^\circ \leq \theta \leq 60^\circ$, examiner respectfully point out that Fig 1 specifically shows X, Y electrode and its extension parts in the magnified

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portion, having one edge part being convex shape and the other edge part having corresponding matching concave shape, each of these shapes forming an angle θ satisfying the condition $30^\circ \leq \theta \leq 60^\circ$.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (703) 305-1971. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

R.G.

Karabi Guharay
Patent Examiner
Art Unit 2879



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